REMARKS

After entry of the above amendments, claims 1, 2, 11, 14 and 23-41 are pending in the application. For ease of examination, Claims 2-10, 12-13 and 15-22 have been canceled and resubmitted as claims 26-41. No new matter is introduced by this amendment. The specification and claim amendments are presented in a revised format per the USPTO's announcement 'Amendments in a Revised Format Now Permitted', signed 31 January 2002, and accordingly do not conform to the current reading of 37 C.F.R. §1.121, which Applicants understand has been waived. Accordingly, a complete listing of all claims that are, or were in the application, along with an appropriate status identifier, is provided above in the section entitled "Amendments to the Claims". Markings are provided on replacement paragraphs and claims amended in the present amendment.

Objection to Title

The title of the instant application stands objected to as not clearly indicative of the invention to which the claims are directed. As shown in the amendment to the specification presented above, the title has been replaced with "Methods and Compositions for Electronic Detection of Nucleic Acids Using Monolayers." In light of this amendment, withdrawal of the objection is respectfully requested.

Objection to Disclosure

The disclosure stands objected to for the misspelling of the word "sequence" in Claim 13, Line 1. In light of the amendment to the claims presented above, withdrawal of this objection is respectfully requested.

Rejection Under 35 U.S.C. § 102(e)(2)

Claims 1-9, 11-13, 16, and 23-25 stand rejected under 35 U.S.C. § 102(e)(2) as being anticipated by Kayyem et al., U.S. Patent No. 6,090,933, ("Kayyem"). The Examiner bases this rejection in particular on the disclosure of Kayyem at Column 3, Lines 11-27. This section of Kayyem teaches a method of detecting a nucleic acid target sequence, and reads in part:

> "The method comprises hybridizing a first probe nucleic acid to the first target domain, if present, to for a hybridization complex. The first probe nucleic acid comprises a conductive oligomer covalently attached to (1) a first electron transfer

> moiety comprising an electrode and (2) a single stranded nucleic acid capable of hybridizing to the target sequence. Then, a second single stranded nucleic acid comprising a covalently attached electron transfer moiety to the second target domain, and electron transfer is detected between said electrode and said electron transfer moiety, if present, as an indicator of the presen[ce] or absence of said target sequence."
>
> Column 3, Lines 14-26.

Thus, Kayyem teaches a method for detecting a target sequence comprising a first probe nucleic acid and a second probe nucleic acid, wherein the second probe nucleic acid has a covalently attached electron transfer moiety.

In contrast, Claims 1 and 23, and the claims depending from them, recite a composition comprising an electrode and a target nucleic acid sequence, wherein the target comprises an electron transfer moiety.

For an anticipation rejection under 35 U.S.C. §102 to be proper, a single reference must expressly or inherently disclose each and every element of a claim. *In re Paulsen*, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994); MPEP § 2131 (citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

As discussed above, Claims 1, 23 and the claims depending from them require a target with a covalently attached electron transfer moiety. Such a labeled target is not taught by Kayyem. As Kayyem does not teach each and every element of Claims 1 and 23, withdrawal of the rejection to those claims is respectfully requested.

The method of target nucleic acid detection taught by Kayyem is discussed above. Kayyem is silent in regards to the use of recruitment linkers for the detection of target nucleic acids.

Claims 2, 11, 14, 24, and the claims depending therefrom, are each directed to compositions comprising an electrode, a capture probe and a second labeled nucleic acid comprising a recruitment linker. This recruitment linker does not hybridize to a component of the assay complex and comprises at least one covalently attached electron transfer moiety.

As discussed above, an anticipation rejection under 35 U.S.C. § 102 is only proper when the cited reference teaches each and every element of a claim.

Claims 2, 11, 14, 24, and the claims depending therefrom, each require a second labeled nucleic acid with a second portion that comprises a recruitment linker which both hybridizes to a component of the assay complex, and has at least one covalently attached

electron transfer moiety. As discussed above, Kayyam does not teach such a recruitment linker. Accordingly, Kayyam does not disclose each and every element of the cited claims and withdrawal of this rejection is respectfully requested.

CONCLUSION

On the basis of the amendments and remarks presented herein, Applicants believe that this application is now in condition for immediate allowance. Applicants respectfully request that the Examiner pass this application to issue, and early notice of such is requested. This paper is filed under 37 C.F.R. section 1.34(a).

Respectfully submitted,

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